

Quinoline And Isoquinoline

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ILOS :

1

Define Quinoline & Isoquinoline and their Structure •

2

Mention application of Quinoline & Isoquinoline •

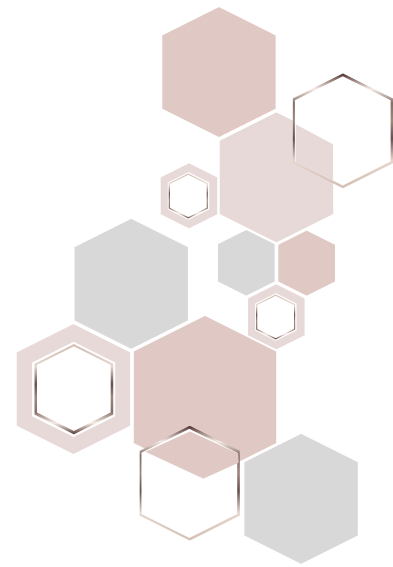
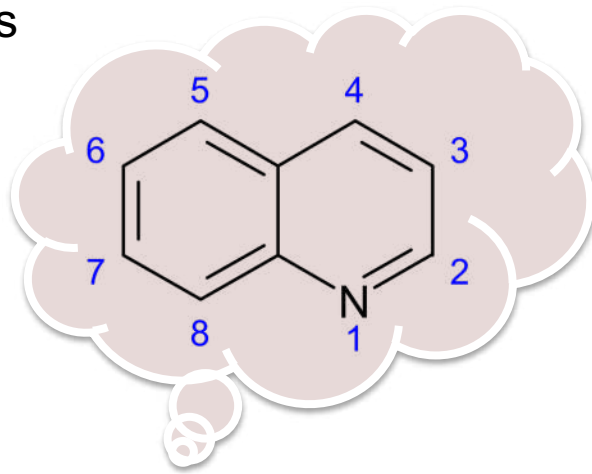
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List physical properties Quinoline & Isoquinoline •



Define Quinoline And Structure

Any of a class of organic compound of the aromatic heterocyclic series characterized by a double-ring structure composed of a benzene and a pyridine ring fused at two adjacent carbon atoms



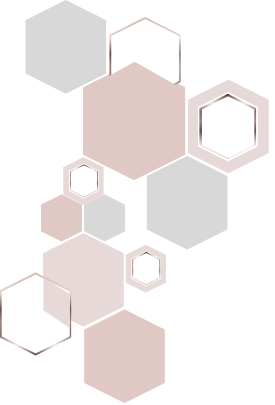
Application of Quinoline

- Manufacture of dyes, Which are extensively used as dyes in various industries such as food and pharmaceutical
- In manufacture drugs
- Use as high-boiling basic solvent in organic reaction



Administration of Niacin is an Important Treatment for Pellagra





Physical properties of Quinoline

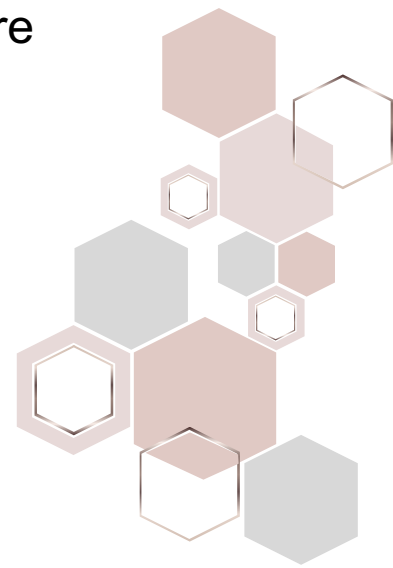
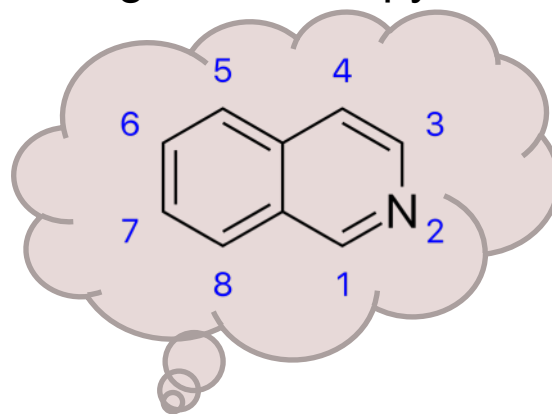
- ✓ The chemical formula C_9H_7N
- ✓ It is colorless hygroscopic liquid with strong odor
- ✓ Exposed to light, become yellow and later brown
- ✓ Quinoline is only slightly soluble in water but dissolves readily in many organic solvents
- ✓ Melting point : - 15 °C
- ✓ Boiling point : 238 °C



Define Isoquinoline And Structure

is a heterocyclic aromatic organic compound. It is a structural isomer of quinoline.

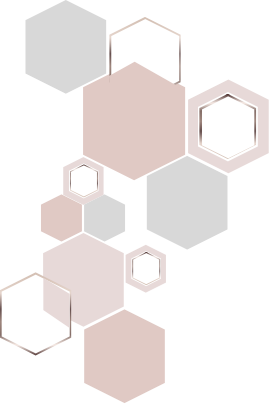
Isoquinoline and **quinoline** are benzopyridines, which are composed of a benzene ring fused to a pyridine ring.



Application of Isoquinoline

- Used in the manufacture of dyes, paints, and anti-fungal.
- as a solvent for the extraction of resins and terpenes, and as a corrosion inhibitor.
- Manufacture of drugs for the treatment and prevention (antihypertensive, Anesthetics).

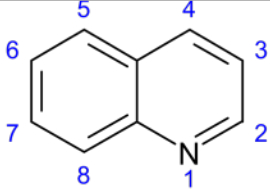
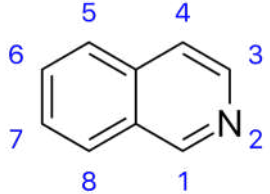


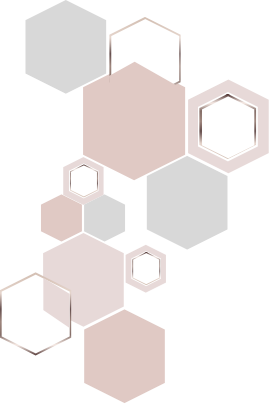


Physical properties of Isoquinoline

- ✓ Isoquinoline is colorless liquid, with unpleasant odor
- ✓ Impure samples can appear brown
- ✓ Dissolve well in organic solvent (Ethanol, acetone act ..)
- ✓ Melting point : 26 - 28 °C
- ✓ Boiling point : 242 °C

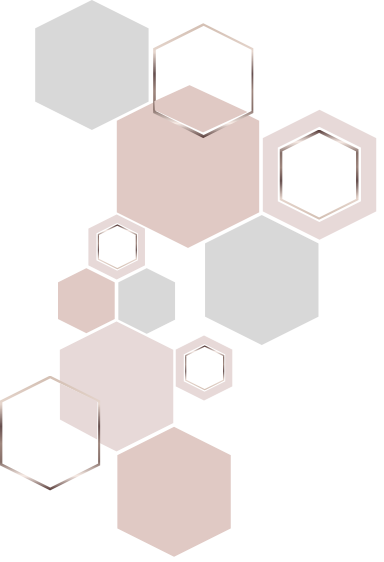
Summary

Quinoline	Isoquinoline
Is organic compound with heterocyclic aromatic ring structure	Is isomer of quinoline
N atom in first Position 	N atom in second Position 
Manufacture of dyes such as food & pharmaceutical	Manufacture of dyes, paints, and anti-fungle
Melting point : - 15 °C, Boiling point : 238 °C	Melting point : 26 - 28 °C, Boiling point : 242 °C



Reference

- *<https://www.britannica.com/science/quinoline>*
- *(Chemistry for Pharmacy Students - General, Organic and Natural Product Chemistry Chapter 4)Page 165-166*



Thank you!

For listening

